

This Page Is Inserted by IFW Operations
and is not a part of the Official Record

BEST AVAILABLE IMAGES

Defective images within this document are accurate representations of the original documents submitted by the applicant.

Defects in the images may include (but are not limited to):

- BLACK BORDERS
- TEXT CUT OFF AT TOP, BOTTOM OR SIDES
- FADED TEXT
- ILLEGIBLE TEXT
- SKEWED/SLANTED IMAGES
- COLORED PHOTOS
- BLACK OR VERY BLACK AND WHITE DARK PHOTOS
- GRAY SCALE DOCUMENTS

IMAGES ARE BEST AVAILABLE COPY.

As rescanning documents *will not* correct images,
please do not report the images to the
Image Problem Mailbox.



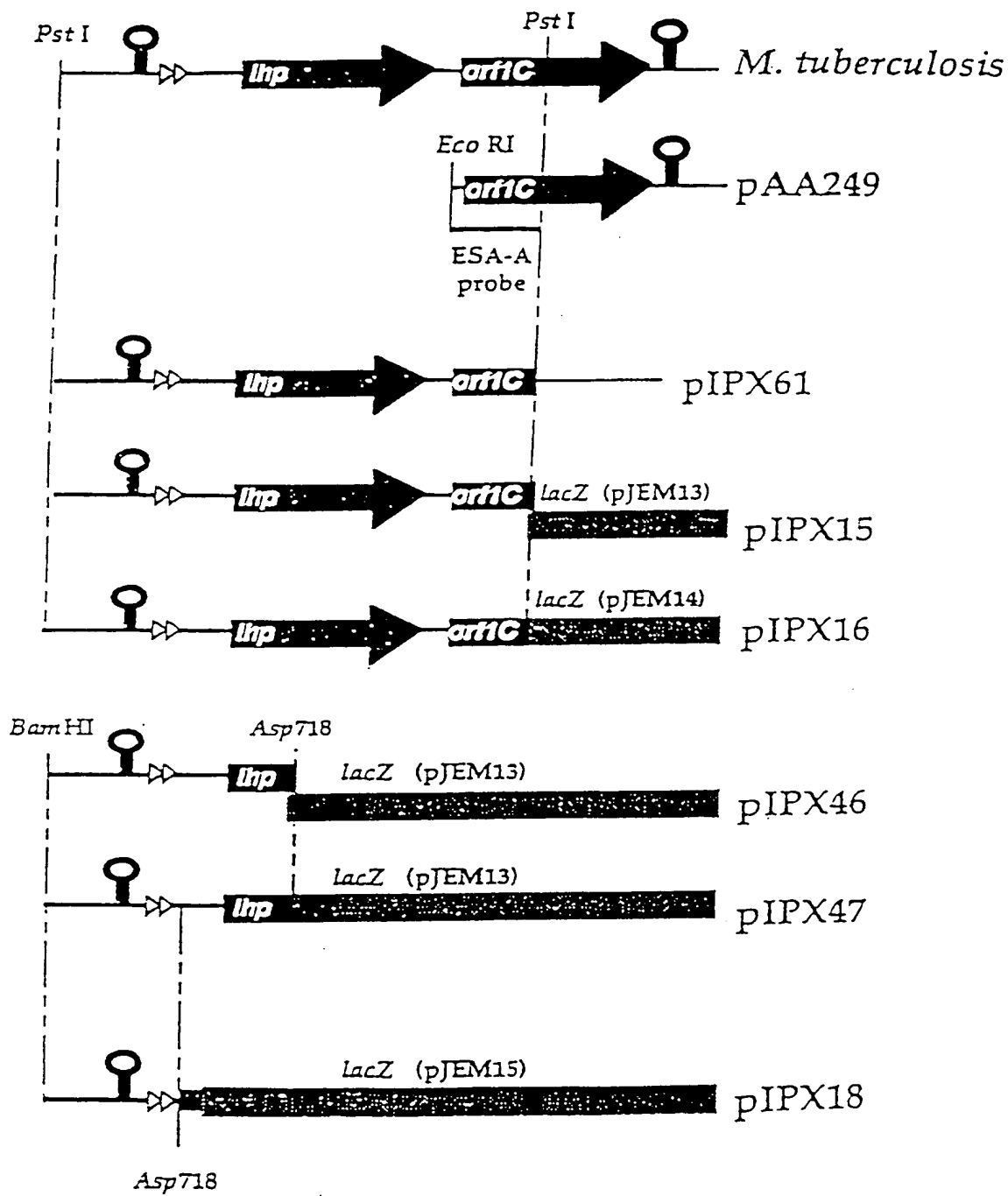


FIGURE 2

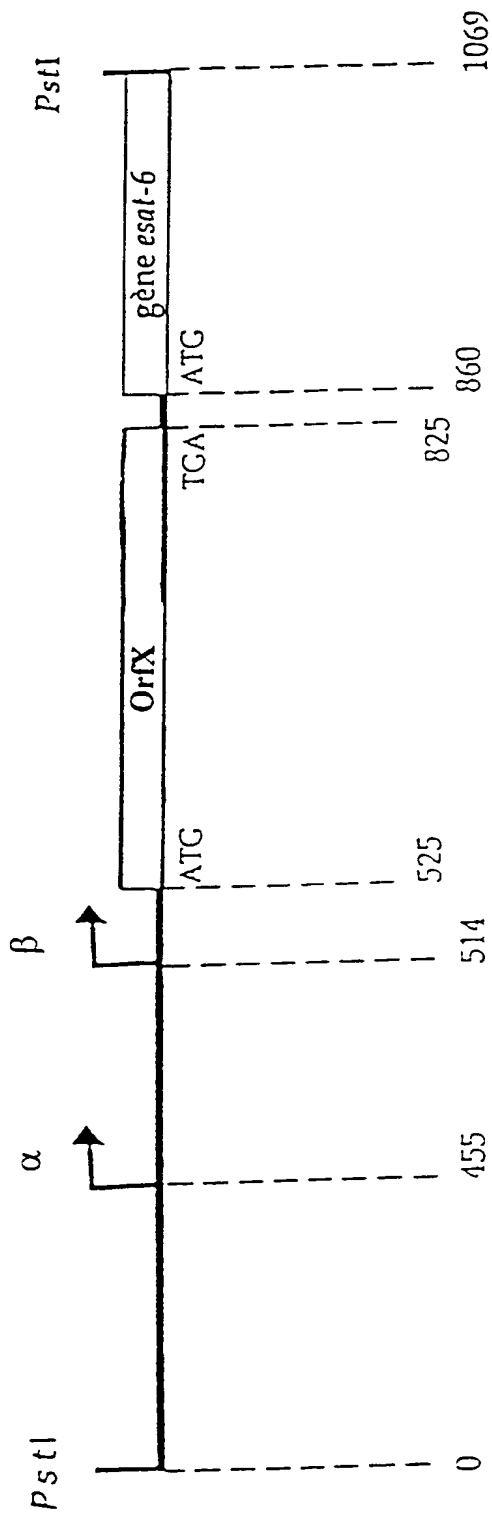


FIGURE 3

Fig. 4A

10 30 50 70
PstI
CTGCAGCAGGTGACGTCGTTGTTTCAGCCAGGTGGGCGGCACCGGCGGGCAACCCAGCCGACGAGGAAGCCGCGCAGAT
90 110 130 150
GGGCCTGCTCGGCACCAGTCCGCTGTCTGAACCATCCGCTGGCTGGTGGATCAGGCCCCAGCGGGGCGGGCCCTGCTGC
170 190 210 230
GCGCGGAGTTCGCTACCTGGCGCAGGTGGGTCTGTTGACCCCGCACGCGCTGATGTCTCAGCTGATCGAAAAGCCGGTTGCC
250 270 290 310
CCCTCGGTGATGCCGGCGGCTGTTGCCGGATCGTCGGTGACGGGTGGCGCCGCTCCGGTGGGTCCGGGAGCGATGGGCCA
330 350 370 390
GGGTTTCGCAATCCGGCGGCTCCACCAGCCCGGGTCTGGTTCGCGCCGGCACCGCTCGCGCAGGAGCGTGAAGAAGACGACG
410 430 450 470
AGGACGACTGGGACGAAGAGGACGACTGGTGAGCTCCCGTAATGACAACAGACTTCCCGGCCACCCGGGCCGGAAGACTT
490 510 530 550
GCCAACATTTTGGCGAGGAAGGTAAAGAGAGAGAGTAGTCCAGCATGGCAGAGATGAAGACCGATGCCGCTACCCCTCGGG
570 590 610 630
CAGGAGGCAGGTAATTTTCGAGCGGATCTCCGGCGACCTGAAAACCCAGATTCGACCAGGTGGAGTCGACGGCAGGTTCTGTT
Q E A G N F E R I S G D L K T Q I D Q V E S T A G S L
650 670 690 710
GCAGGGCCAGTGGCGCGGCGCGGGGACGGCCGCCCAGGCCGCGGTGGTTCGCTTCCAAGAAGCAGCCAATAAGCAGA
Q G Q W R G A A G T A A Q A A V V R F Q E A A N K Q K
730 750 770 790
AGCAGGAACTCGACGAGATCTCGACGAATATTCTGTCAGGCCGGCGCTCCAACTACTCGAGGGCCGACGAGGAGCAGCAGCAG
Q E L D E I S T N I R Q A G V Q Y S R A D E E Q Q Q
810 830 850
GCGCTGTCTCTCGCAAATGGGCTTCTGACCCGCTAATACGAAAAGAAACGGAGCAAAAACATGCACAG.....
A L S S Q M G F * H T E
+1 Mtb.
+1 Ms
RBS
lhp
esat-6

Fig. 4B

Mtb CFP-10 MAEMKTDAATLGQEAGNFERISGDLKTQIDQVESTAGSLQGQWRGAAGTA
| | | | : | | . | . | : | : . | : . | . : : | : | . : | . | | . | : . |
Mlep L45 MAEMITEAAILTQQAAQFDQIASGLSQERNFVDSIGQS FQNTWEGQAASA

Mtb CFP-10 AQAAVVRFQEAAANKQKQELDEISTNIRQAGVQYSRADEEQQQALSSQMGE
| : | : . | | : | | .. | . : | : . | | . . | . : | : | . | | | . | . |
Mlep L45 ALGALGRFDEAMQDQIRQLESIVDKLNRSGGNYTKTDDEANQLLSKMNF

Fig. 5A

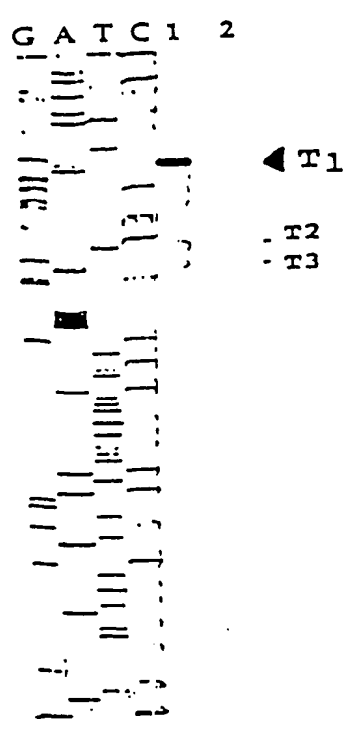


Fig. 5C

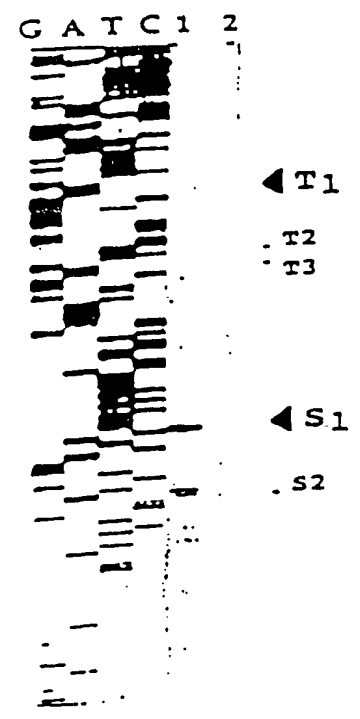
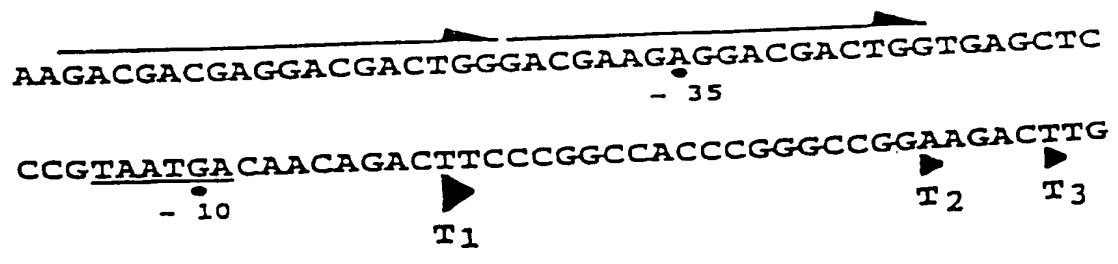


Fig. 5B



6/13

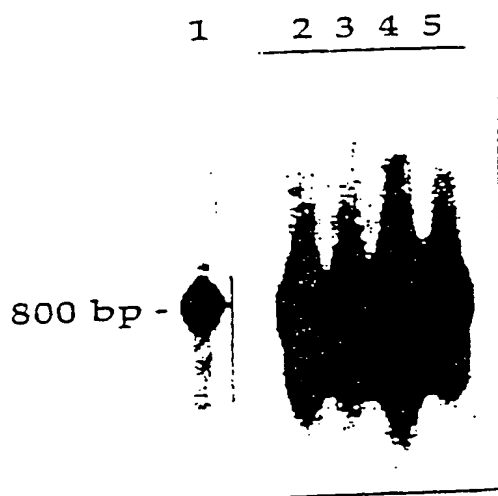
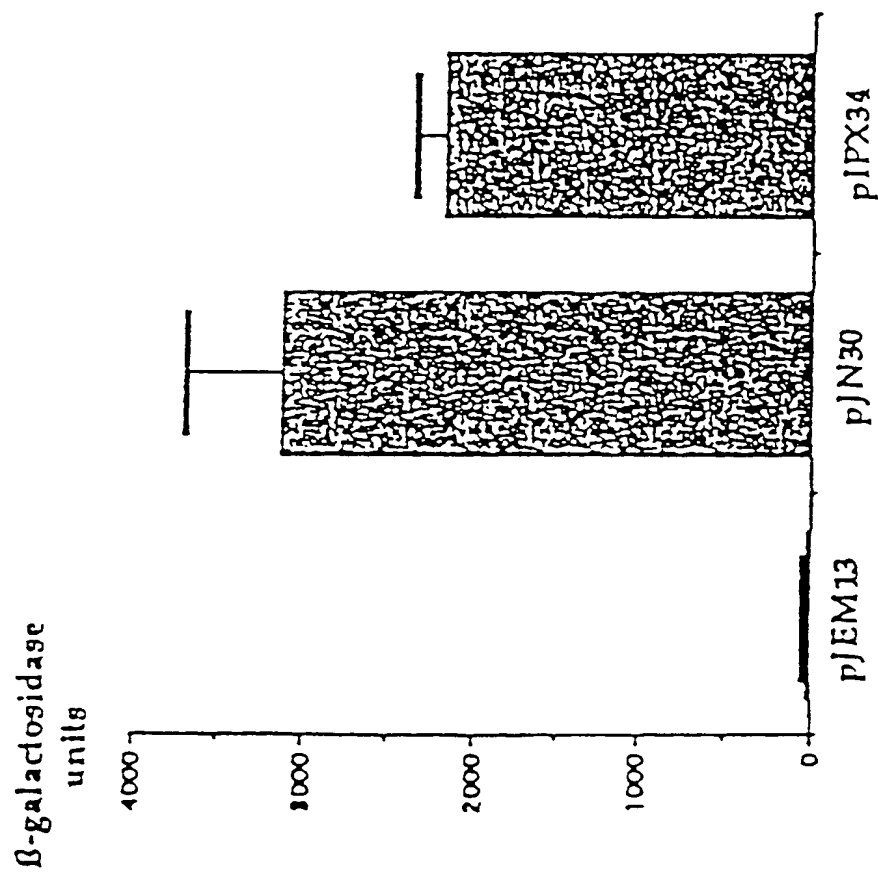
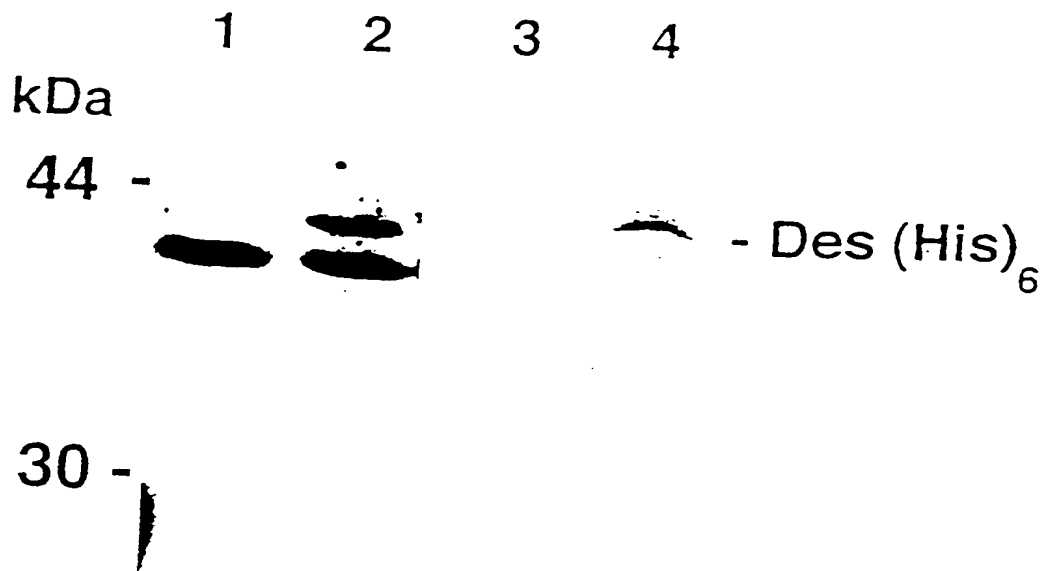


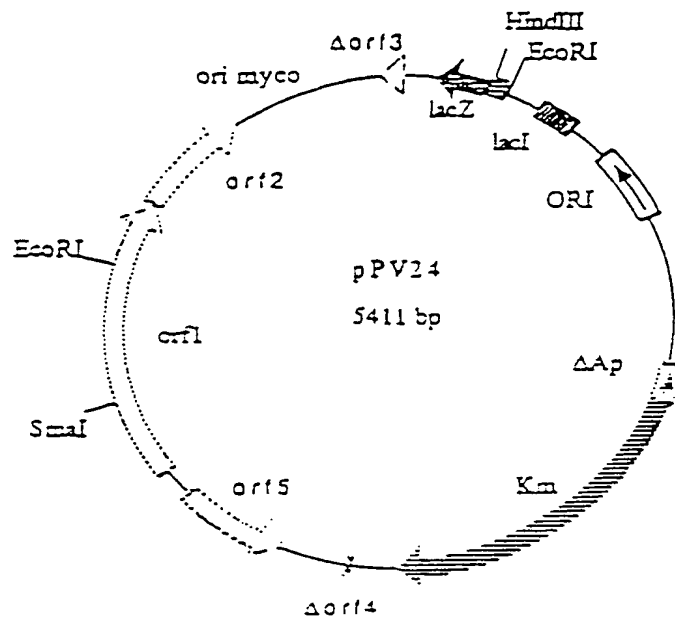
FIGURE 6



FIGURE 7

FIGURE 8

FIGURE 9



$$\begin{array}{ccccccc}
 \text{EcoRI} & & & & \text{XbaI} & & \text{HindIII} \\
 5' \text{---GAATTCGAGCTCGGTACCCGGGGATCCTCTAGAGTCGACCTGCAGCCATGCAAGCTT---} 3' \\
 & \text{KpnI} & & \text{BamHI} & & \text{PstI} &
 \end{array}$$

Sites uniques de clonage

FIGURE 10

11/13

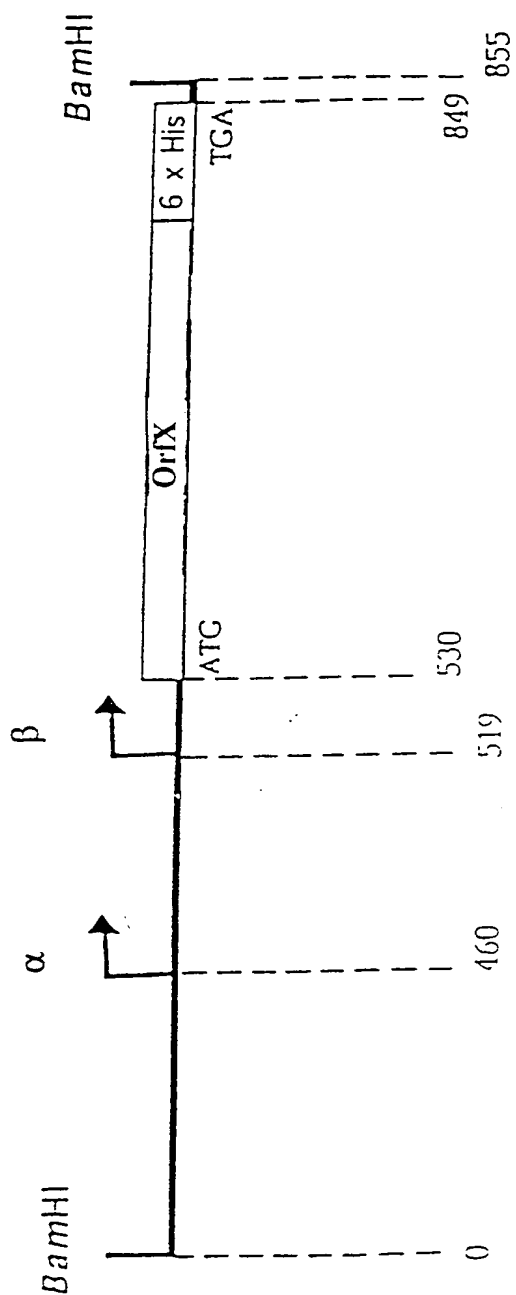


FIGURE 11

Fig. 12B

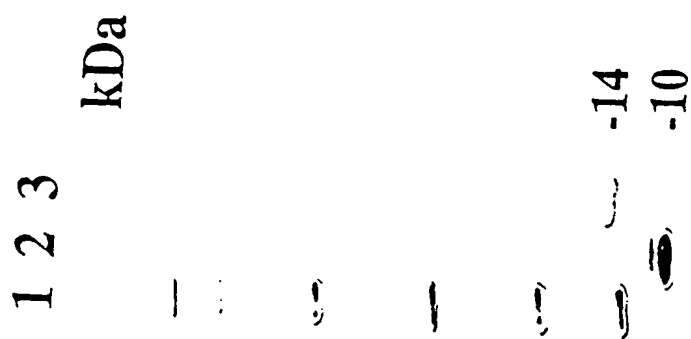
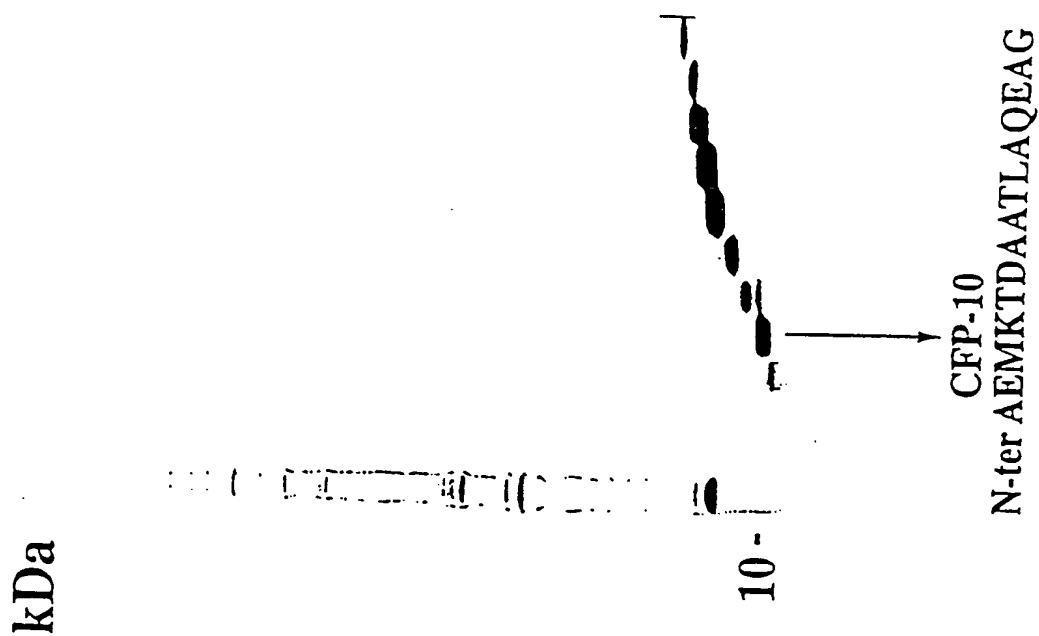


Fig. 12A



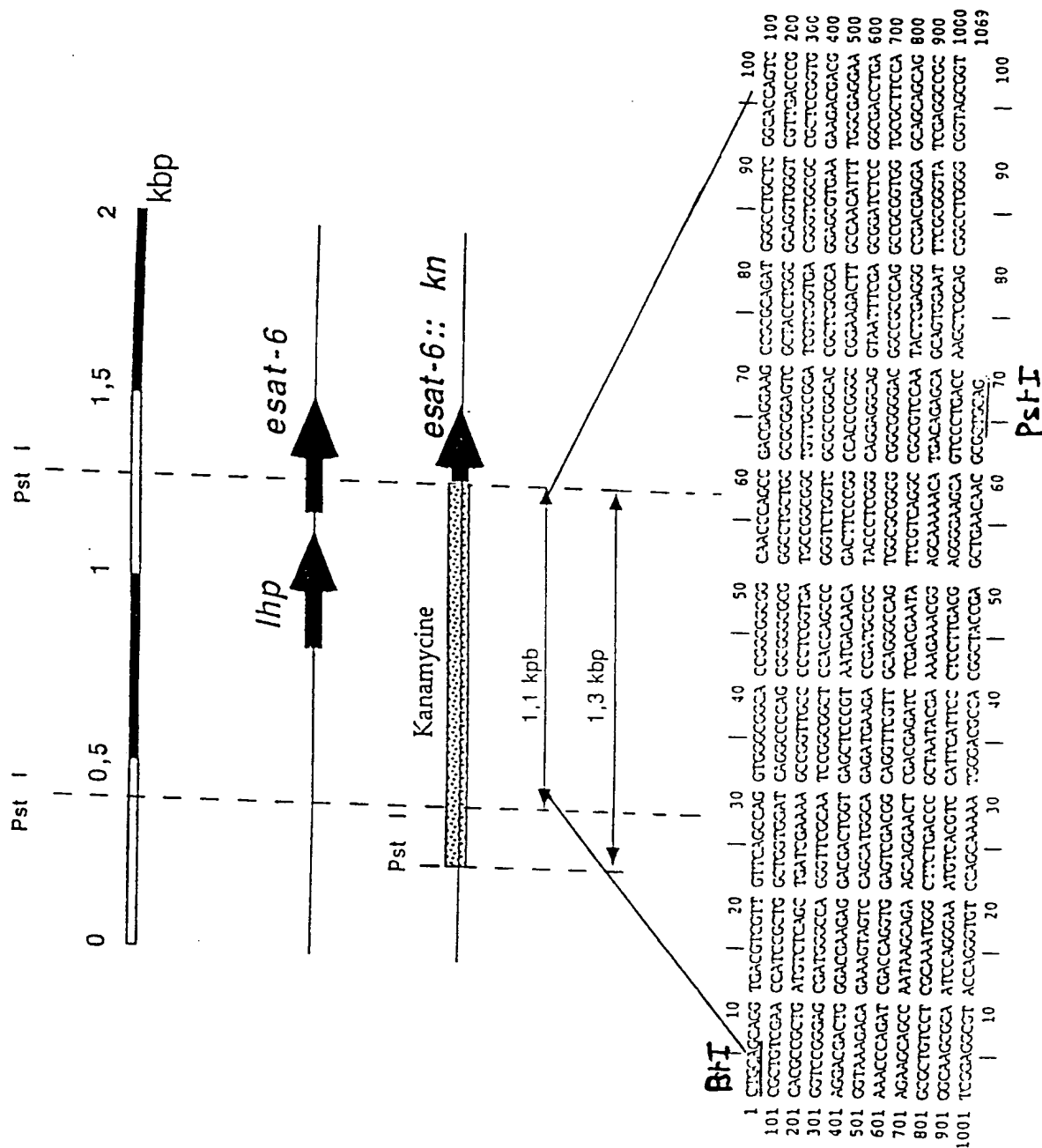


FIGURE 13